Appln. No.: 10/588,814

Amendment Dated November 28, 2007 Reply to Office Action of August 28, 2007

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

 (Currently Amended) A method for determining parameters of a fluctuating stream of fluid in a pipe using at least three electrodes provided at thea periphery of the stream in spaced relationship to each other in thead direction of flow, comprising:

providingsequencing the supply of an AC voltage signal to a first transmitting electrode configuration located upstream of a receiving electrode and to a second transmitting electrode configuration situated downstream thereof; and

receiving_signals received-at a-the_receiving electrode eonfiguration-that is located between the <u>first and second</u> transmitting electrodes <u>in succession from the first and second</u> transmitting electrodes in accordance with the sequencing of the supply of the AC signal;

analyzing the received signals from the first and second transmitting electrodes are registered by means of dielectric currents and are subjected_to-detect a time-discrete cross correlation between received signals of the first and second transmitting electrodes;; and

<u>determining from the results of which the transit times of using the detected time-</u> <u>discrete cross correlation of the received signals</u>fluctuations detected by the electrodes are determined.

2. (Currently Amended) A method as defined in claim 1, wherein:

the <u>sequencing of the supply of the AC voltage signals are includes feeding the AC voltage signal</u> to the <u>first and second transmitting electrodes configurations</u> in a temporally controlled manner; and

the <u>analyzing of the received signals includes carrying out the time-discrete</u> cross correlation is-carried-out-implementing the<u>using a</u> profile of the temporal control of the <u>first and second</u> transmitted signals.

 (Currently Amended) A method as defined in claim 1, wherein the sequencing of thean supply of the AC voltage signal is alternately switchedswitching the supply of the AC signal Appln. No.: 10/588,814

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between to the first and second transmitting electrodes.

4. (Currently Amended) A method as defined in claim 1, wherein the at-least-one-first transmitting electrode configuration and/or the at-least-one-second transmitting electrode configuration has a plurality of single transmitting electrodes distributed around the periphery of the stream.

- (Currently Amended) A method as defined in claim 1, <u>further comprising using a further</u>
 wherein two-first transmitting electrode and <u>a further two-second transmitting electrode</u>
 configurations are used.
- (Currently Amended) A method as defined in claim 1, further comprising determining a velocity-distribution profile from the transit times of the-fluctuations between the <u>first and second</u> electrodes by means of back projection.
- 7. (Currently Amended) A method as defined in claim 1, wherein the <u>first and second</u> electrodes configurations are provided on a flexible insulating support material and that thisthe <u>support</u> material is disposed on the inner or outer surface of a delivery pipe for the fluid.
- 8. (Currently Amended) A method as defined in claim 1, wherein a common external shield is provided for the <u>first and second</u> electrodes configurations.
- (Currently Amended) A method as defined in claim 1, <u>further comprising asymmetrically carrying out</u> wherein the supply of the AC voltage <u>signalsignals</u> and the measurement of the received signals are carried out asymmetrically on a common ground.
- 10. (Currently Amended) A method as defined in claim 44, wherein at least one of the plurality of single transmitting electrodes is shifted in position in an upstream/downstream direction relatively to the receiving electrode configuration-so that the a relevant distance can be adapted according to the am amplitude of the resulting cross correlation value to optimize the amplitude of the resulting cross correlation valuesame to the conditions of flow.
- 11. (Currently Amended) A device for determining parameters of a fluctuating stream of fluid in a <u>delivery</u> pipe using at least three electrodes provided at the <u>a periphery</u> of the stream in spaced relationship to each other in the <u>a direction of flow, comprising</u>:
 - a first transmitting electrode configuration located upstream and a second transmitting ${\sf Page~3~of~9}$

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electrode configuration located downstream, and a receiving electrode configuration located between the transmitting electrodes of the first and second electrode configurations, the first and second electrode configurations being provided at the periphery of a the stream of a the fluid passing through athe delivery pipe; and

a receiving and evaluation device <u>having a receiving electrode circumferentially</u> <u>surrounding the periphery of the stream</u> for detecting the received signals produced by dielectric currents, for carrying out a time-discrete cross correlation and for determining the transit times of the-fluctuations detected by the <u>receiving electrode</u>electrodes from the-cross correlation values.

- (Currently Amended) A device as defined in claim 11, further comprising a driver circuit
 for temporally controlled feedingsupplying of the an AC voltage signal signals to the transmitting
 electrode configurations.
- 13. (Currently Amended) A device as defined in claim 11, wherein the-at least one first transmitting electrode configuration and/or at least one second transmitting electrode configuration have/has a plurality of single electrodes distributed around the periphery of the stream.
- 14. (Previously Presented) A device as defined in claim 11, wherein two first transmitting electrode configurations and two second transmitting electrode configurations are provided.
- 15. (Currently Amended) A device as defined in claim 11, wherein the electrode configurations are provided on a flexible insulating support material and that thisthe support material is situated on the inner or outer surface of athe delivery pipe for the fluid.
- 16. (Previously Presented) A device as defined in claim 11, wherein a common external shield is provided for the electrode configurations.
- 17. (Previously Presented) A device as defined in claim 11, wherein at least one of the transmitting electrode configurations is mounted for displacement in the upstream/downstream direction relative to the receiving electrode configuration.
- 18. (New) A device as defined in claim 11, wherein the receiving electrode is one common continuous receiver ring covering a circumference of the delivery pipe.